Clarion

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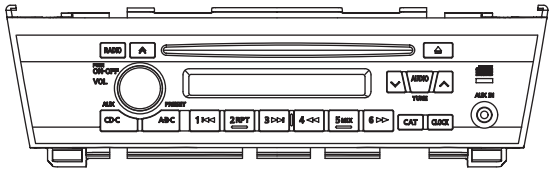
Service Manual



NISSAN Automobile Genuine
FM/AM Radio CD Stereo

Model PN-2591M-G
(Genuine No.28185 6Z670)
(ID No.CY26A)

SPECIFICATIONS

Radio section

Tuning system:	PLL frequency synthesizer system
Receive range:	AM 530kHz to 1,710kHz
	FM 87.75MHz,87.9 to 107.9MHz
Intermediate frequency:	
	AM 450+3/-3kHz
	FM 10.7+0.3/-0.3MHz
Quieting sensitivity:	AM Less than 32dBu(at 20dB S/N)
	FM Less than 10dBu(at 30dB S/N)
Separation:	FM More than 22+5/-7dB(1kHz)
S/N ratio:	AM More than 45dB
	FM More than 50dB
Auto tuning stop sensitivity:	
	AM 32+6/-6dBu
	(600/1000/1400kHz)
	FM 25+6/-6dBu
	(87.9/98.1/107.9MHz)

CD section

Disc:	12cm Disc
Separation:	More than 50dB(Filter:20kHz LPF)
S/N ratio:	More than 74dB
Distortion:	Less than 0.4%
	(Filter:20kHz LPF)

General

Load impedance:	4 ohm/CH
Power output:	40W x 4
Power supply voltage:	DC13.2V(10.8V to 16.0V)
	Negative ground
Back-up consumption:	Less than 3mA
Dimensions(mm):	180(W) x 52(H) x 159(D)
Weight:	1.35kg

NOTES

* We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.
* Specifications and design are subject to change without notice for further improvement.

COMPONENTS

PN-2591M-A,M-B,M-C

1.Main unit	----------	1

To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.

For proper circuit construction, use of insulation tubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.

If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.

3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
5. Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handling flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly(more than three times)to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.
8. Cautions in checking that the optical pickup lights up.
   The laser is focused on the disc reflection surface through the lens of the optical pickup. When checking that the laser optical diode lights up, keep your eyes more than 30cms away from the lens. Prolonged viewing of the laser within 30cms may damage your eyesight.
9. Cautions in handling the optical pickup
   The laser diode of the optical pickup can be damaged by electrostatic charge caused by your clothes and body. Make sure to avoid electrostatic charges on your clothes or body, or discharge static electricity before handling the optical pickup.

9-1. Laser diode
   The laser diode terminals are shorted for transportation in order to prevent electrostatic damage. After replacement, open the shorted circuit. When removing the pickup from the mechanism, short the terminals by soldering them to prevent this damage.

9-2. Actuator
   The actuator has a powerful magnetic circuit. If a magnetic material is put close to it. Its characteristics will change. Ensure that no foreign substances enter through the ventilation slots in the cover.

9-3. Cleaning the lens
   Dust on the optical lens affects performance. To clean the lens, apply a small amount of isopropyl alcohol to lens paper and wipe the lens gently.

ADJUSTMENT

Item	Procedure	Measuring instrument
FM noise convergence	1. Input the 98.1MHz/55dBu(1kHz 30% MOD) signal. 2. Adjust the outputs to -18+3/-3dB by VR102 when the SG output is set to -20dBu.	SSG AC volt meter
Clock accuracy	1. Turn on the power switch, pressing the "M4" and "M2" button to make the unit the test mode. 2. Set a universal timer to TP101(T-BASE), adjust TC101 so that a reading of the meter is 0+0.2/-0 sec./day.	Universal timer

EXPLANATION OF IC

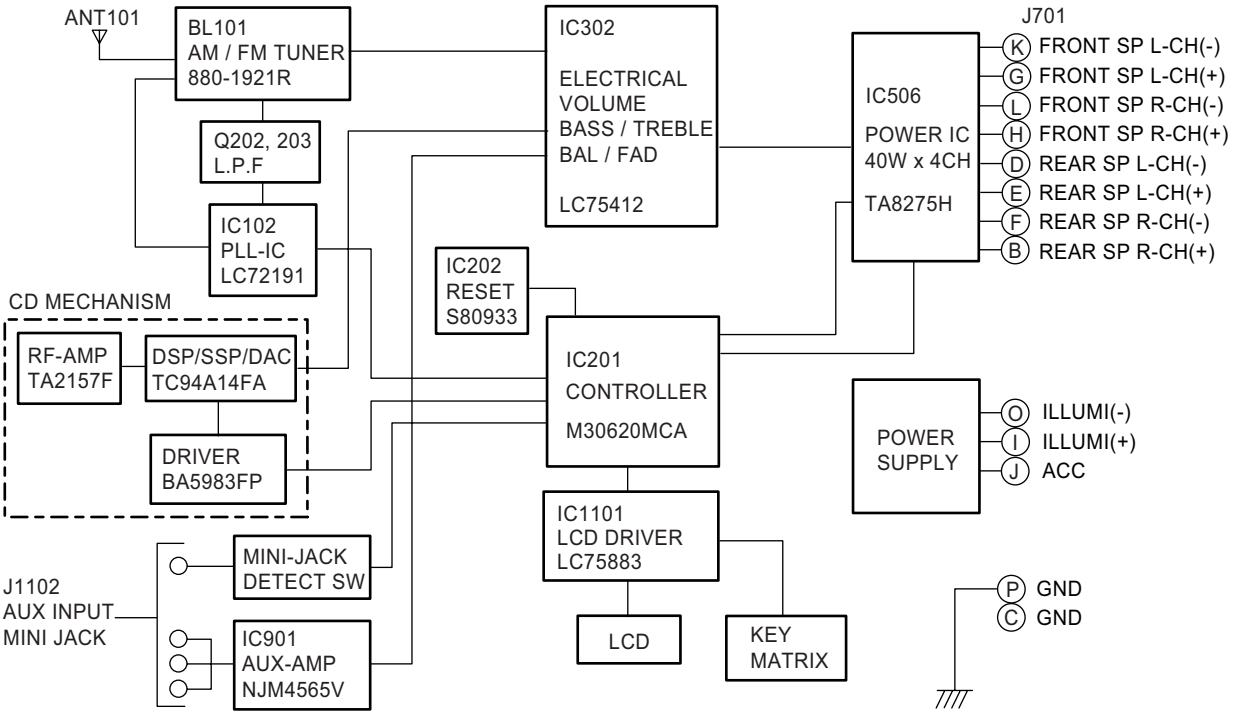
052-3180-10 M30620MCA-8R3GP System Controller

1.Terminal Description

pin 1:	LCD CLK	: O :	The clock pulse output to the LCD driver.
pin 2:	LCD DO	: O :	The srial data output to the LCD driver.
pin 3:	LCD DI	: IN :	The srial data input from the LCD driver.
pin 4:	ILL PULSE	: IN :	Illumination control signal input.
pin 5:	TIME BASE	: IN :	Time base pulse input.
pin 6:	CNT GND	: - :	Connect to the ground.
pin 7:	CN VSS	: IN :	Connect to VSS.
pin 8:	TEST	: - :	For the Test.
pin 9:	ILL ON	: IN :	Illumination ON signal input.
pin 10:	RESET	: IN :	Reset signal input.
pin 11:	X OUT	: O :	Crystal connection.
pin 12:	GND	: - :	Ground.
pin 13:	X IN	: IN :	Crystal connection.
pin 14:	VDD	: - :	Positive supply voltage.
pin 15:	NU	: - :	Not in use.
pin 16:	BU DET	: IN :	Backup detection signal input.
pin 17:	ACC IN	: IN :	ACC ON flag input.
pin 18:	NU	: - :	Not in use.
pin 19:	SBSY	: IN :	Sub code block synchronous signal input.
pin 20:	AMP ON	: O :	Audio power amplifier ON signal output.
pin 21:	SYS ON	: O :	System ON signal output.
pin 22:	LCD ON	: O :	LCD back light ON signal output.
pin 23:	AF MUTE	: O :	Audio frequency signal muting.
pin 24:	BEEP	: O :	Beep out.
pin 25:	NU	: - :	Not in use.
pin 26:	NU	: - :	Not in use.
pin 27:	NU	: - :	Not in use.
pin 28:	CD ON	: O :	CD ON signal output.
pin 29:	NDS FLASH TX	: O :	NDS serial data output for external A/C.
pin 30:	NDS FLASH RX	: IN :	NDS serial data input for external A/C.
pin 31:	FLASH CLK	: O :	The clock pulse output for the flash memory.
pin 32:	NU	: - :	Not in use.
pin 33:	NU	: - :	Not in use.
pin 34:	NU	: - :	Not in use.
pin 35:	NDS CNT	: O :	Low = A/C 1, High = A/C 2.
pin 36:	NDS REQ 2	: IN :	NDS request signal input.
pin 37:	NDS REQ 1	: IN :	NDS request signal input.
pin 38:	SOURCE CHG	: O :	The signal source change signal output.
pin 39:	FLASH EPM	: O :	FLASH EPM.
pin 40:	VOL DO	: O :	Serial data output to the volume IC.
pin 41:	VOL CLK	: O :	The clock pulse output to the volume IC.
pin 42:	VOL CE	: O :	The chip enable signal output to the volume IC.
pin 43:	NU	: - :	Not in use.
pin 44:	FLASH CE	: O :	The chip enable signal output to the flash memory.
pin 45:	NU	: - :	Not in use.
pin 46:	JACK ON	: IN :	AUX detection signal input.
pin 47:	NU	: - :	Not in use.
pin 48:	CD CONNECT	: IN :	CD connection check signal input.
pin 49:	BUC 0	:I/O:	CD IC Data input / output.
pin 50:	BUC 1	:I/O:	CD IC Data input / output.
pin 51:	BUC 2	:I/O:	CD IC Data input / output.
pin 52:	BUC 3	:I/O:	CD IC Data input / output.
pin 53:	BUC CLOCK	: O :	CD IC clock pulse output.
pin 54:	CCE	: O :	The chip enable signal output.
pin 55:	CD RESET	: O :	The reset pulse output to the CD IC.
pin 56:	S STOP	: IN :	Inside limit signal input from the CD mechanism.
pin 57:	CHU SW	: IN :	CD disc chucking signal input.
pin 58:	TR A	: IN :	Photo sensor signal input from the CD mechanism.
pin 59:	TR B	: IN :	Photo sensor signal input from the CD mechanism.
pin 60:	VDD	: - :	Positive supply voltage.
pin 61:	LD CONT	:I/O:	Loading motor control signal input/output.
pin 62:	GND	: - :	Ground.
pin 63:	PLL CE	: O :	The chip enable signal output to the PLL IC.
pin 64:	PLL CLK	: O :	The clock pulse output to the PLL IC.
pin 65:	PLL DO	: O :	Serial data output to the PLL IC.
pin 66:	PLL DI	: IN :	Serial data input from the PLL IC.
pin 67:	ST/TWEET	:I/O:	Outputs "L" at AM 900kHz receiving. Inputs "L" at FM stereo receiving.
pin 68:	LD MUTE	: O :	Muting signal output to the CD mechanism.
pin 69:	RADIO ON	: O :	Radio ON flag output.
pin 70:	NU	: - :	Not in use.
pin 71:	NU	: - :	Not in use.
pin 72:	NU	: - :	Not in use.
pin 73:	NU	: - :	Not in use.
pin 74:	NU	: - :	Not in use.
pin 75:	NU	: - :	Not in use.
pin 76:	NU	: - :	Not in use.
pin 77:	NU	: - :	Not in use.
pin 78:	NU	: - :	Not in use.
pin 79:	NU	: - :	Not in use.
pin 80:	NU	: - :	Not in use.
pin 81:	NU	: - :	Not in use.
pin 82:	NU	: - :	Not in use.
pin 83:	NU	: - :	Not in use.
pin 84:	NU	: - :	Not in use.
pin 85:	VOL 1	: IN :	Volume control pulse input from the rotary encoder.
pin 86:	VOL 2	: IN :	Volume control pulse input from the rotary encoder.
pin 87:	NU	: - :	Not in use.
pin 88:	NU	: - :	Not in use.
pin 89:	CD EJECT	: IN :	CD eject switch signal input.
pin 90:	NU	: - :	Not in use.
pin 91:	ILL DET	: IN :	Illumination ON signal input.
pin 92:	NU	: - :	Not in use.
pin 93:	NU	: - :	Not in use.
pin 94:	A VSS	: - :	Analog ground.
pin 95:	NU	: - :	Not in use.
pin 96:	Vref	: - :	Reference voltage.
pin 97:	A VCC	: - :	Positive supply voltage for the internal analog section.
pin 98:	POWER SW	: IN :	Power switch ON signal input.
pin 99:	LCD RESET	: O :	Reset pulse output to LCD.
pin100:	LCD CE	: O :	The chip enable signal output to the LCD driver.

BLOCK DIAGRAM

Main section



EXPLODED VIEW/PARTS LIST

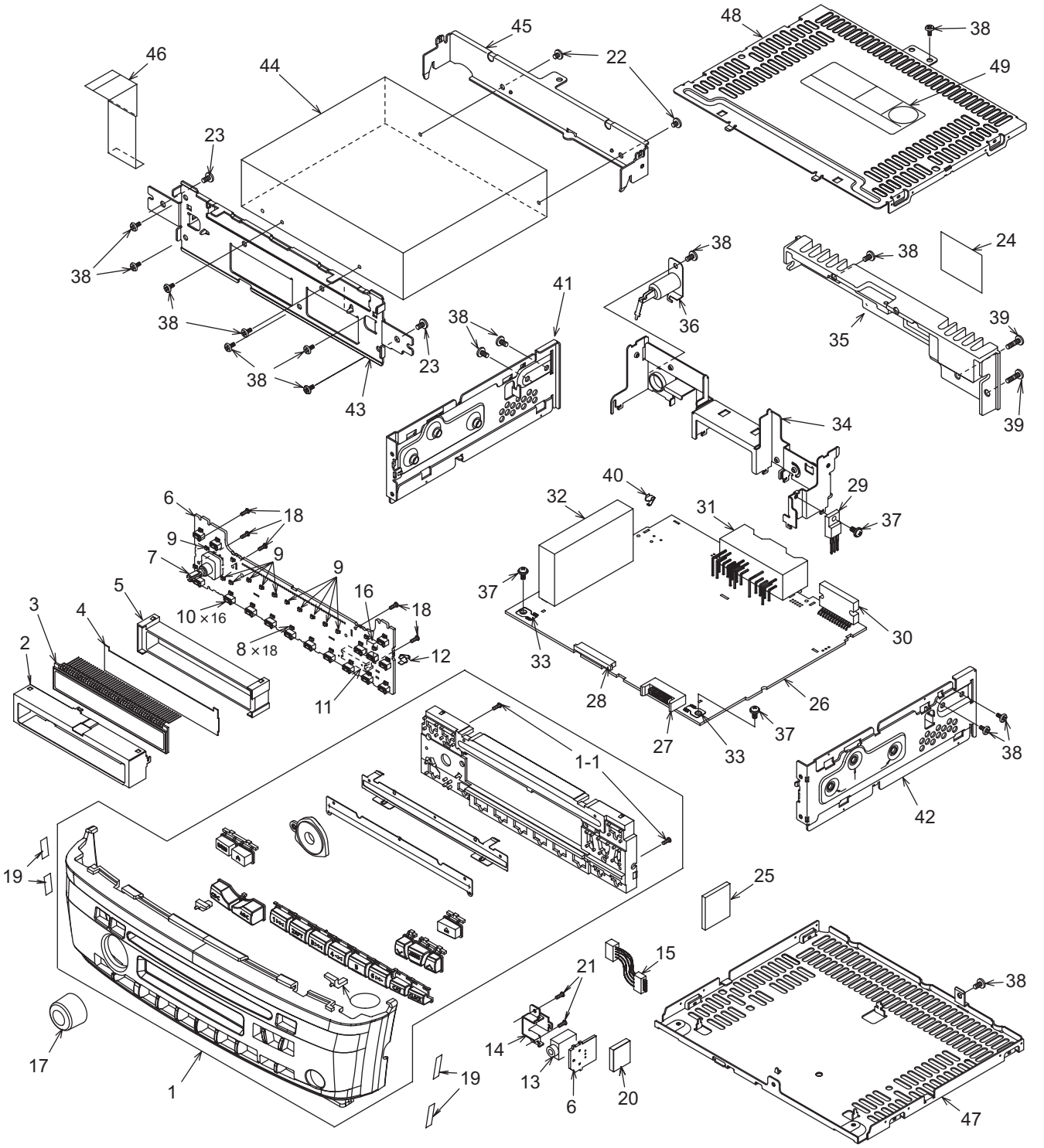
Main section

NO.	PART NO.	DESCRIPTION	Q'TY
1	940-8019-75	ESCUTCHEON ASSY	1
1-1	716-0872-00	PAD SCREW	2
2	331-3621-00	LCD COVER	1
3	379-1268-30	LCD INDICATOR	1
4	335-6968-00	COLOR FILTER	1
5	335-6967-80	LCD HOLDER	1
6	----------	SWITCH PWB	1
7	016-0010-09	VR-W/SHAFT	1
8	001-7063-91	LED(YEL)	18
9	001-7048-96	LED(YEL)	11
10	013-6302-50	SWITCH	16
11	074-1279-70	OUTLET SOCKET(20P)	1
12	073-0774-00	TERMINAL	1
13	075-0306-00	JACK	1
14	331-3623-00	JACK HOLDER	1
15	854-4562-00	EXTENSION LEAD	1
16	076-0478-55	PLUG	1
17	380-5562-80	KNOB	1
18	716-0872-00	PAD SCREW(M1.7 x 5)	5
19	347-2510-00	CUSHION TAPE	4
20	345-5324-00	CUSHION RUBBER	1
21	716-0778-00	WAVE SCREW	2

NO.	PART NO.	DESCRIPTION	Q'TY
22	714-2603-81	MACHINE SCREW(M2.6 x 3)	2
23	702-3008-81	TAP SCREW	2
24	347-5206-00	SHIELD SHEET	1
25	345-5325-00	CUSHION RUBBER	1
26	----------	MAIN PWB	1
27	076-0648-20	PLUG(20P)	1
28	074-1191-26	OUTLET SOCKET(26P)	1
29	103-2012-00	TRANSISTOR	1
30	051-2042-00	IC(TA8275H)	1
31	074-1068-11	OUTLET SOCKET	1
32	880-1921R	AM/FM TUNER	1
33	073-0762-90	TERMINAL	2
34	307-0683-05	REAR PLATE	1
35	313-1931-10	HEAT SINK	1
36	092-0702-00	ANT RECEPT	1
37	716-0878-00	IT SCREW(M2.6 x 5)	3
38	714-2606-81	MACHINE SCREW(M2.6 x 6)	15
39	714-2612-81	MACHINE SCREW(M2.6 x 12)	2
40	073-0774-00	TERMINAL	1
41	305-0316-00	SIDE PLATE(L)	1
42	305-0317-00	SIDE PLATE(R)	1
43	331-3624-00	ES-PLATE	1

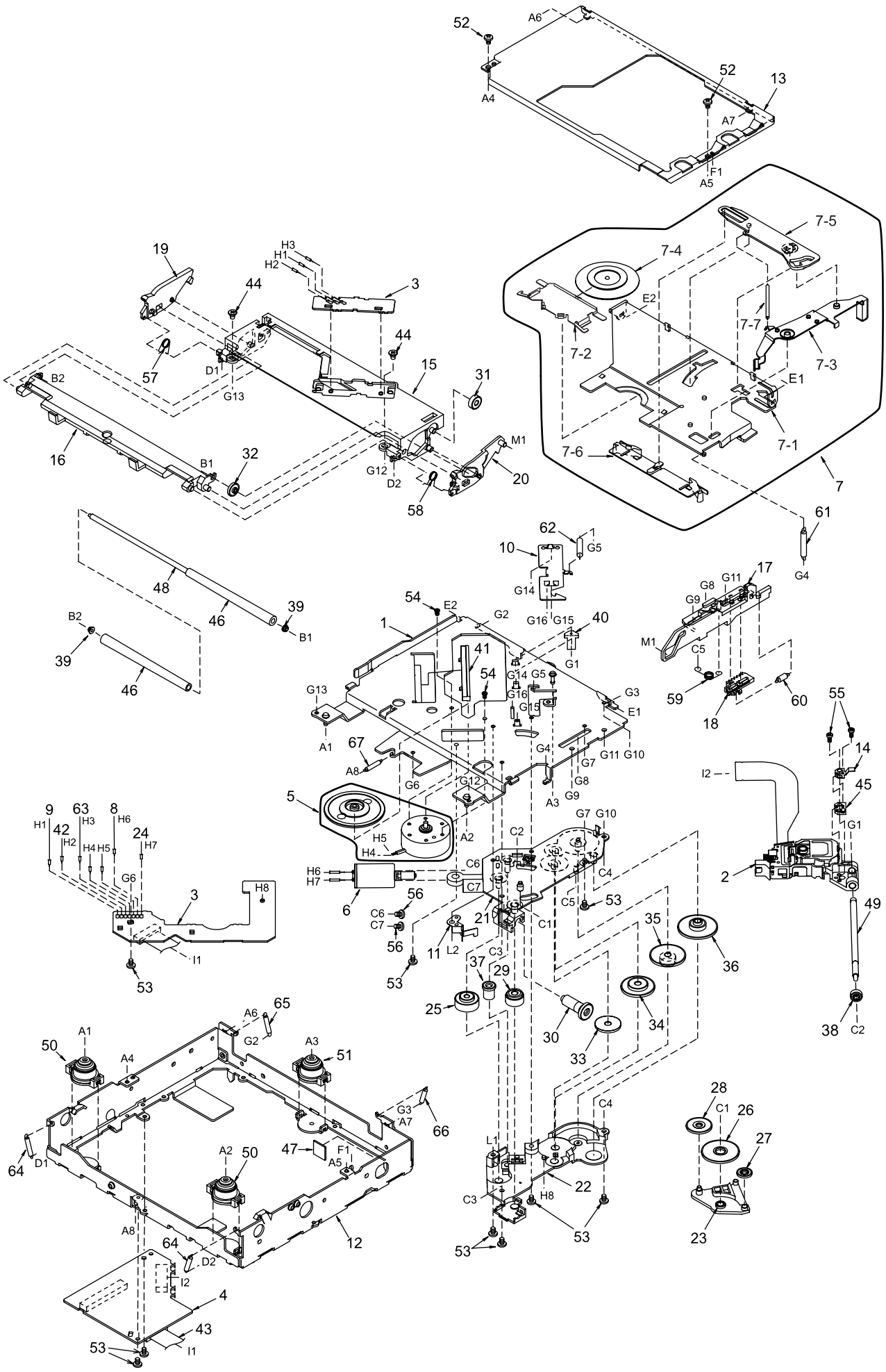
NO.	PART NO.	DESCRIPTION	Q'TY
44	929-0220-86	CD MECHANISM	1
45	331-3254-20	MECH-BRACKET	1
46	816-2549-00	FLAT WIRE	1

NO.	PART NO.	DESCRIPTION	Q'TY
47	311-1833-20	LOWER CASE	1
48	310-1739-20	UPPER CASE	1
49	286-9269-35	SETPLATE	1



PN-2591M-G

CD mechanism section

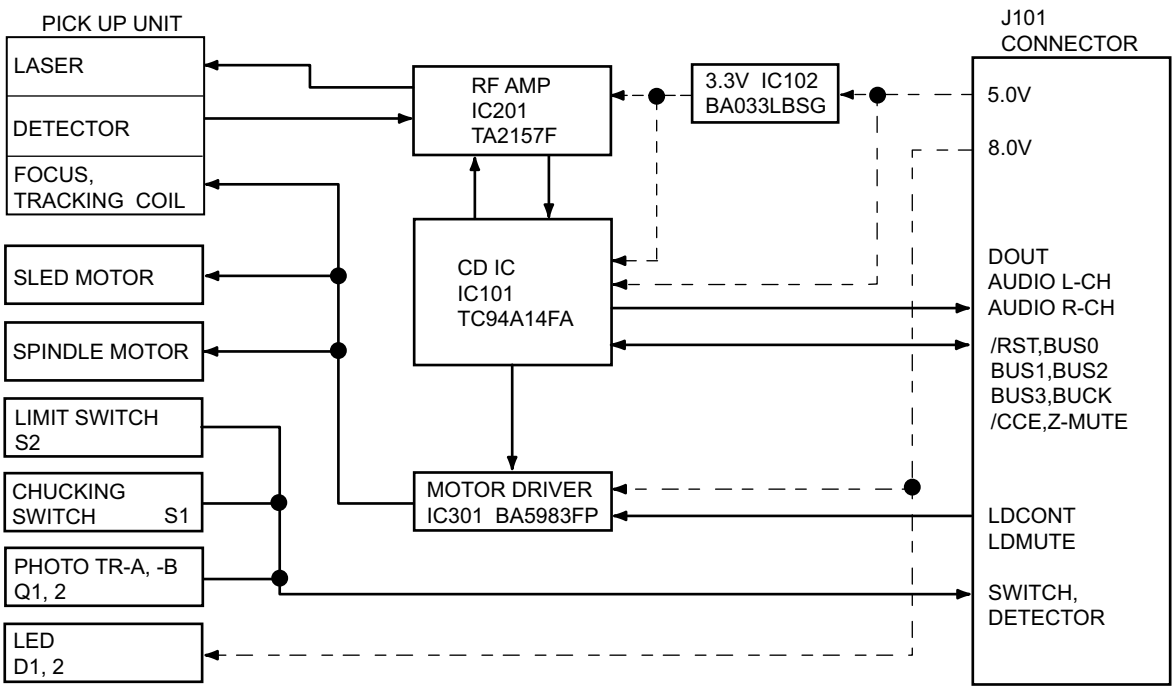


NO.	PART NO.	DESCRIPTION	Q'TY
1	966-0595-25	DRIVE PLATE ASSY	1
2	969-0060-30	PICK UP UNIT	1
3	----------	LED PWB	1
4	----------	CD PWB	1
5	SMA-182-100	MOTOR ASSY(SPINDLE)	1
6	SMA-183-100	MOTOR ASSY(SLED)	1
7	HBS-524-100	CLAMPER SUB ASSY	1
7-1	620-1022-25	CLAMPER LINK	1
7-2	620-1023-23	CLAMPER PLATE	1
7-3	620-1721-20	SENSOR ARM	1
7-4	621-0708-20	CLAMPER RING	1
7-5	621-0626-21	STOPPER LINK	1
7-6	621-0627-21	DISC STOPPER	1
7-7	750-3471-20	SENSOR SPRING	1
8	803-4906-60	VINYL COAT WIRE(ORG)	1
9	816-2591-00	LEAD WIRE(YEL)	1
10	620-1025-22	ID-LOCK PLATE	1
11	620-1026-21	SPRING PLATE	1
12	620-1027-27	LOWER CHASSIS	1
13	620-1028-23	UPPER CHASSIS	1
14	966-0638-20	SH-RACK ASSY	1
15	621-0598-27	UPPER GUIDE	1
16	621-0718-21	ROLLER GUIDE	1
17	621-0600-26	SHIFT LEVER	1
18	621-0601-21	RACK	1
19	621-0602-22	LOCK ARM L	1
20	621-0603-25	LOCK ARM R	1
21	621-0724-21	GEAR BASE	1
22	621-0605-22	GEAR COVER	1
23	621-0606-21	IDLE CASE	1
24	816-2590-00	VINYL COAT WIRE(GRN)	1
25	621-0608-21	SECOND GEAR	1
26	621-0609-20	BASE GEAR	1
27	621-0610-20	IDLE GEAR A	1
28	621-0611-20	IDLE GEAR B	1
29	621-0612-21	ROLLER GEAR A	1
30	621-0613-20	ROLLER GEAR B	1

NO.	PART NO.	DESCRIPTION	Q'TY
31	621-0614-20	ROLLER GEAR C	1
32	621-0615-21	ROLLER GEAR D	1
33	621-0616-20	POWER GEAR A	1
34	621-0617-20	POWER GEAR B	1
35	621-0618-20	POWER GEAR C	1
36	621-0619-20	POWER GEAR D	1
37	621-0620-20	THREAD GEAR A	1
38	621-0621-20	THREAD GEAR B	1
39	621-0622-21	ROLLER SLEEVE	2
40	621-0623-23	LS-HOLDER	1
41	621-0624-22	GUIDE RAIL	1
42	816-2593-00	LEAD WIRE(PUR)	1
43	816-2542-01	FLAT WIRE(10P)	1
44	716-3473-00	SCREW	2
45	621-0709-20	SH-BASE	1
46	621-0629-20	LOADING ROLLER	2
47	345-5476-20	CUSHION RUBBER	1
48	622-1664-20	ROLLER SHAFT	1
49	624-0018-01	LEAD SCREW	1
50	629-0081-21	DAMPER F	2
51	629-0082-21	DAMPER R	1
52	714-2003-81	MACHINE SCREW	2
53	716-1507-00	SCREW	9
54	716-1733-00	SCREW	2
55	716-3469-00	SCREW	2
56	716-3446-00	SCREW	2
57	750-3465-21	ROLLER SPRING L	1
58	750-3466-20	ROLLER SPRING R	1
59	750-3467-21	SHIFT SPRING	1
60	750-3468-20	RACK SPRING	1
61	750-3469-20	CLAMPER SPRING	1
62	750-3470-20	ID-LOCK SPRING	1
63	816-2592-00	LEAD WIRE(BLU)	1
64	750-3472-21	DR-SPRING F	2
65	750-3473-20	DR-SPRING RA	1
66	750-3474-20	DR-SPRING RB	1
67	750-3475-21	DR-SPRING C	1

BLOCK DIAGRAM

CD mechanism section



ELECTRICAL PARTS LIST

Main PWB section(B1)

Note) Several different parts of the same reference number are alternative parts. One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION
ANT101	092-0702-00	ANT RECEPT
BL101	880-1921R	AM/FM TUNER
C104	119-0000-05	1/16W 0 ohm JW
C114	166-1007-50	10pF CH
C115	043-0277-51	0.022uF
C117	043-0277-51	0.022uF
C118	168-1022-55	1000pF
C119	182-1073-29	10V100uF
C120	042-0458-90	50V1uF
C122	182-1073-29	10V100uF
C123	182-1073-29	10V100uF
C125	182-4763-39	16V47uF
C126	183-1056-68	50V1uF NP
C127	168-8222-55	8200pF
C128	168-4732-78	0.047uF
C129	168-4732-78	0.047uF
C130	166-1201-50	12pF CH
C131	166-2201-50	22pF CH
C132	166-2201-50	22pF CH
C133	166-1501-50	15pF CH
C134	168-1022-55	1000pF
C135	168-1042-78	16V 0.1uF
C136	168-1042-78	16V 0.1uF
C137	166-2201-50	22pF CH
C139	166-1801-50	18pF CH
C140	183-4763-39	16V47uF
C141	168-2232-55	0.022uF
C201	168-1022-55	1000pF
C202	168-1022-55	1000pF
C203	166-1011-50	100pF CH
C204	166-1011-50	100pF CH
C205	166-1011-50	100pF CH
C206	166-1011-50	100pF CH
C207	168-1022-55	1000pF
C210	166-1011-50	100pF CH
C211	166-1011-50	100pF CH

REF No.	PART No.	DESCRIPTION
C213	184-3373-29	10V330uF
C214	168-1042-78	16V 0.1uF
C215	184-3373-29	10V330uF
C216	168-1042-78	16V 0.1uF
C217	042-0403-55	16V33uF
C218	042-0403-55	16V33uF
C219	168-1022-55	1000pF
C301	168-4722-55	4700pF
C303	183-4763-39	16V47uF
C305	166-2201-50	22pF CH
C306	184-2273-28	10V220uF
C307	183-1063-39	16V10uF
C315	182-2263-19	6.3V22uF
C316	182-1053-69	50V1uF
C317	168-1042-78	16V 0.1uF
C318	178-1042-78	0.1uF
C319	178-1042-78	0.1uF
C320	168-1042-78	16V 0.1uF
C321	182-1053-69	50V1uF
C322	178-3942-78	0.39uF
C323	178-3942-78	0.39uF
C325	182-1053-69	50V1uF
C326	182-1053-69	50V1uF
C328	182-1063-39	16V10uF
C329	182-1063-39	16V10uF
C330	182-1063-39	16V10uF
C331	182-1063-39	16V10uF
C332	178-1842-78	0.18uF
C333	178-1842-78	0.18uF
C334	178-1842-78	0.18uF
C335	178-1842-78	0.18uF
C336	168-8212-55	820pF
C337	168-8212-55	820pF
C338	168-8212-55	820pF
C339	168-8212-55	820pF
C340	182-1063-39	16V10uF

REF No.	PART No.	DESCRIPTION
C341	182-1063-39	16V10uF
C342	168-1832-55	0.018uF
C343	182-1063-39	16V10uF
C344	182-1063-39	16V10uF
C345	182-1063-39	16V10uF
C346	182-1063-39	16V10uF
C553	117-0000-05	1/8W 0 ohm JW
C554	117-0000-05	1/8W 0 ohm JW
C555	117-0000-05	1/8W 0 ohm JW
C556	117-0000-05	1/8W 0 ohm JW
C565	168-1032-55	0.01uF
C566	168-2232-55	0.022uF
C567	168-1032-55	0.01uF
C568	178-3332-78	0.033uF
C569	178-3332-78	0.033uF
C570	178-3332-78	0.033uF
C571	178-3332-78	0.033uF
C573	182-1053-69	50V1uF
C574	183-2253-69	50V2.2uF
C582	183-1053-69	50V1uF
C583	178-2242-78	0.22uF
C701	172-1041-15	0.1uF
C702	042-0447-00	16V2200uF
C703	168-2222-55	2200pF
C704	168-2222-55	2200pF
C705	168-2222-55	2200pF
C706	168-2222-55	2200pF
C707	168-2222-55	2200pF
C708	168-2222-55	2200pF
C709	168-2222-55	2200pF
C710	168-2222-55	2200pF
C712	172-1041-15	0.1uF
C713	182-1063-39	16V10uF
C714	183-6843-69	50V0.68uF
C715	168-2232-55	0.022uF
C716	178-1042-55	0.1uF

REF No.	PART No.	DESCRIPTION
C802	182-4763-39	16V47uF
C803	182-1063-39	16V10uF
C804	182-4763-19	6.3V47uF
C805	182-4763-19	6.3V47uF
C806	182-1063-39	16V10uF
C807	182-1063-39	16V10uF
C808	168-1042-78	16V 0.1uF
C809	184-4773-39	16V470uF
C810	183-4756-58	35V4.7uF NP
C811	168-1042-78	16V 0.1uF
C812	168-1042-78	16V 0.1uF
C813	183-1063-39	16V10uF
C901	166-2201-50	22pF CH
C902	166-2201-50	22pF CH
C903	166-2201-50	22pF CH
C904	166-2201-50	22pF CH
C905	166-2201-50	22pF CH
C906	166-2201-50	22pF CH
C907	168-1042-78	16V 0.1uF
C908	168-1042-78	16V 0.1uF
C909	168-1042-78	16V 0.1uF
C910	168-1042-78	16V 0.1uF
CCT201	050-0140-54	1/32W 1k ohm x4J
CCT202	050-0140-54	1/32W 1k ohm x4J
CCT203	050-0140-54	1/32W 1k ohm x4J
CCT204	050-0140-54	1/32W 1k ohm x4J
CCT205	050-0140-54	1/32W 1k ohm x4J
CCT206	050-0140-54	1/32W 1k ohm x4J
CCT207	050-0140-54	1/32W 1k ohm x4J
CCT208	050-0140-54	1/32W 1k ohm x4J
CCT209	050-0140-54	1/32W 1k ohm x4J
CCT210	050-0140-54	1/32W 1k ohm x4J
CCT211	050-0140-54	1/32W 1k ohm x4J
CCT212	050-0140-54	1/32W 1k ohm x4J
CCT213	050-0140-54	1/32W 1k ohm x4J
CCT214	050-0140-54	1/32W 1k ohm x4J
D701	001-2015-00	RL253
D703	001-0347-34	MA4062L
D704	001-0466-90	S5688B
D802	001-0347-48	MA4091H
D803	001-0516-90	MA111
D804	001-0504-31	HZS6 A2L
D806	001-0504-31	HZS6 A2L
D808	001-0504-45	HZS9B1L
D810	001-0347-46	MA4091L
IC102	051-6212-08	LC72191JM-TLM
IC201	052-3180-10	M30620MCA-8R3GP
IC202	051-5436-08	S-80933ANMP-DDX
IC301	051-3020-90	NJM4565V
IC302	051-5027-00	LC75412WH
IC506	051-2042-00	TA8275H
IC701	051-5418-08	S-80827ANMP-EDQ
IC901	051-3020-90	NJM4565V
J201	074-1191-26	26P
J701	074-1068-11	NS10+6
L104	010-2003-04	COIL
L105	010-6009-76	22uH
L202	010-6009-64	2.2uH
L701	009-0670-01	CHOKE
P401	076-0544-12	12P
P701	076-0648-20	20P
Q106	190-1150-00	2SA1150
Q107	125-2004-92	RN1402
Q108	190-1150-00	2SA1150
Q202	192-2712-51	2SC2712G,L
Q203	192-2712-51	2SC2712G,L
Q701	192-2712-00	2SC2712
Q801	193-2118-00	2SD2118
Q802	125-2004-92	RN1402
Q803	190-1150-00	2SA1150
Q804	125-2004-92	RN1402

REF No.	PART No.	DESCRIPTION
Q805	125-0002-92	RN2402
Q806	193-1858-00	2SD1858
Q811	193-2118-00	2SD2118
Q812	125-9003-92	IMD3
Q813	103-2012-00	2SD2012
Q814	125-9003-92	IMD3
Q816	193-2118-00	2SD2118
Q817	193-1306-00	2SD1306
Q818	192-2712-00	2SC2712
R111	119-2221-15	1/10W 2.2k ohm
R112	119-2221-15	1/10W 2.2k ohm
R113	119-3321-15	1/10W 3.3k ohm
R114	111-2701-98	1/4W 27 ohm
R115	119-2221-15	1/10W 2.2k ohm
R116	111-1501-98	1/4W 15 ohm
R117	119-4721-15	1/10W 4.7k ohm
R118	119-4741-15	1/10W 470k ohm
R119	111-1001-98	1/4W 10 ohm
R120	111-2221-98	1/4W 2.2k ohm
R121	111-1031-98	1/4W 10k ohm
R122	119-1021-15	1/10W 1k ohm
R123	111-1031-98	1/4W 10k ohm
R124	111-2221-98	1/4W 2.2k ohm
R126	119-8201-15	1/10W 82 ohm
R128	119-4721-15	1/10W 4.7k ohm
R129	119-4721-15	1/10W 4.7k ohm
R130	119-4731-15	1/10W 47k ohm
R198	119-0000-05	1/10W 0 ohm JW
R199	119-0000-05	1/10W 0 ohm JW
R201	119-1021-15	1/10W 1k ohm
R202	119-1021-15	1/10W 1k ohm
R203	119-1031-15	1/10W 10k ohm
R204	119-0000-05	1/10W 0 ohm JW
R205	119-1031-15	1/10W 10k ohm
R206	119-4731-15	1/10W 47k ohm
R207	119-4731-15	1/10W 47k ohm
R208	119-4731-15	1/10W 47k ohm
R209	119-1041-15	1/10W 100k ohm
R210	119-1041-15	1/10W 100k ohm
R211	119-4731-15	1/10W 47k ohm
R212	119-4731-15	1/10W 47k ohm
R214	119-4731-15	1/10W 47k ohm
R215	119-4731-15	1/10W 47k ohm
R216	119-4731-15	1/10W 47k ohm
R221	119-4731-15	1/10W 47k ohm
R222	119-4731-15	1/10W 47k ohm
R223	119-1031-15	1/10W 10k ohm
R224	119-1031-15	1/10W 10k ohm
R225	119-1031-15	1/10W 10k ohm
R226	119-4731-15	1/10W 47k ohm
R227	119-4731-15	1/10W 47k ohm
R228	119-1021-15	1/10W 1k ohm
R229	119-4731-15	1/10W 47k ohm
R232	119-2231-15	1/10W 22k ohm
R234	119-4731-15	1/10W 47k ohm
R235	119-1031-15	1/10W 10k ohm
R236	119-4731-15	1/10W 47k ohm
R237	119-4731-15	1/10W 47k ohm
R239	119-4731-15	1/10W 47k ohm
R240	119-1041-15	1/10W 100k ohm
R242	119-4721-15	1/10W 4.7k ohm
R245	119-1031-15	1/10W 10k ohm
R301	119-1021-15	1/10W 1k ohm
R302	119-1021-15	1/10W 1k ohm
R308	119-4731-15	1/10W 47k ohm
R310	119-4731-15	1/10W 47k ohm
R334	119-1021-15	1/10W 1k ohm
R335	119-1021-15	1/10W 1k ohm
R338	119-4741-15	1/10W 470k ohm
R339	119-4731-15	1/10W 47k ohm
R340	119-0000-05	1/10W 0 ohm JW

REF No.	PART No.	DESCRIPTION
R342	119-4721-15	1/10W 4.7k ohm
R343	119-4721-15	1/10W 4.7k ohm
R346	119-4721-15	1/10W 4.7k ohm
R347	119-4721-15	1/10W 4.7k ohm
R501	119-0000-05	1/10W 0 ohm JW
R502	119-3331-15	1/10W 33k ohm
R502	119-0000-05	1/10W 0 ohm JW
R503	119-0000-05	1/10W 0 ohm JW
R504	119-0000-05	1/10W 0 ohm JW
R526	119-0000-05	1/10W 0 ohm JW
R527	119-0000-05	1/10W 0 ohm JW
R530	119-0000-05	1/10W 0 ohm JW
R531	119-0000-05	1/10W 0 ohm JW
R573	119-0000-05	1/10W 0 ohm JW
R574	119-0000-05	1/10W 0 ohm JW
R585	119-1831-15	1/10W 18k ohm
R588	119-0000-05	1/10W 0 ohm JW
RR589	119-0000-05	1/10W 0 ohm JW
R590	119-1021-15	1/10W 1k ohm
R591	119-2221-15	1/10W 2.2k ohm
R592	119-2221-15	1/10W 2.2k ohm
R593	119-2221-15	1/10W 2.2k ohm
R594	119-2221-15	1/10W 2.2k ohm
R595	119-5631-15	1/10W 56k ohm
R596	119-5631-15	1/10W 56k ohm
R597	119-5631-15	1/10W 56k ohm
R598	119-5631-15	1/10W 56k ohm
R599	119-4721-15	1/10W 4.7k ohm
R619	119-4721-15	1/10W 4.7k ohm
R701	119-1031-15	1/10W 10k ohm
R702	119-5611-15	1/10W 560 ohm
R703	111-1531-98	1/4W 15k ohm
R704	114-2291-11	1W 2.2 ohm
R705	119-2731-15	1/10W 27k ohm
R706	119-4731-15	1/10W 47k ohm
R803	111-4711-98	1/4W 470 ohm
R804	111-1021-98	1/4W 1k ohm
R805	119-2231-15	1/10W 22k ohm
R806	119-4741-15	1/10W 470k ohm
R807	119-2231-15	1/10W 22k ohm
R810	116-2211-15	1/4W 220 ohm
R814	111-2211-98	1/4W 220 ohm
R815	119-1041-15	1/10W 100k ohm
R818	111-3911-98	1/4W 390 ohm
R819	119-1041-15	1/10W 100k ohm
R825	111-1801-98	1/4W 18 ohm
R826	119-5611-15	1/10W 560 ohm
R827	119-4721-15	1/10W 4.7k ohm
R828	111-1831-98	1/4W 18k ohm
R829	111-1801-98	1/4W 18 ohm
R833	111-3911-98	1/4W 390 ohm
R901	119-1531-15	1/10W 15k ohm
R902	119-1531-15	1/10W 15k ohm
R903	119-1531-15	1/10W 15k ohm
R904	119-1531-15	1/10W 15k ohm
R905	119-1031-15	1/10W 10k ohm
R906	119-1031-15	1/10W 10k ohm
R907	119-1031-15	1/10W 10k ohm
R908	119-1031-15	1/10W 10k ohm
R909	119-1031-15	1/10W 10k ohm
R910	119-1031-15	1/10W 10k ohm
SUP101	060-0122-10	DSP-201M-S00B
TC101	004-1580-60	30pF
TM101	073-0762-90	TERMINAL
TM801	073-0762-90	TERMINAL
VR102	012-5203-56	10k ohm
X101	061-1066-00	7.2MHz
X201	060-1505-50	10MHz
PWB	039-2323-02	PWB(WITHOUT COMPONENT)

Switch PWB section(B2)

REF No.	PART No.	DESCRIPTION
C1101	166-8211-50	820pF
C1102	168-4732-78	0.047uF
C1103	168-4732-78	0.047uF
C1104	168-1042-78	16V 0.1uF
C1105	042-0416-59	10V33uF
D135	001-0529-72	MA8200-M
D136	001-0529-72	MA8200-M
D137	001-0529-72	MA8200-M
D138	001-0529-72	MA8200-M
D1100	001-7048-96	RAY1112H-75M
D1101	001-7048-96	RAY1112H-75M
D1102	001-7048-96	RAY1112H-75M
D1103	001-7048-96	RAY1112H-75M
D1104	001-7048-96	RAY1112H-75M
D1105	001-7048-96	RAY1112H-75M
D1106	001-7048-96	RAY1112H-75M
D1107	001-7048-96	RAY1112H-75M
D1114	001-7048-96	RAY1112H-75M
D1115	001-7048-96	RAY1112H-75M
D1116	001-7048-96	RAY1112H-75M
D1117	001-7063-91	RAY1102W
D1118	001-7063-91	RAY1102W
D1119	001-7063-91	RAY1102W
D1120	001-7063-91	RAY1102W
D1121	001-7063-91	RAY1102W
D1122	001-7063-91	RAY1102W
D1123	001-7063-91	RAY1102W
D1124	001-7063-91	RAY1102W

REF No.	PART No.	DESCRIPTION
D1125	001-7063-91	RAY1102W
D1126	001-7063-91	RAY1102W
D1127	001-7063-91	RAY1102W
D1128	001-7063-91	RAY1102W
D1129	001-7063-91	RAY1102W
D1130	001-7063-91	RAY1102W
D1131	001-7063-91	RAY1102W
D1132	001-7063-91	RAY1102W
D1133	001-7063-91	RAY1102W
D1134	001-7063-91	RAY1102W
D1145	001-0516-90	MA111
D1146	001-0516-90	MA111
D1147	001-0516-90	MA111
D1148	001-0516-90	MA111
D1152	001-0529-32	MA8056-M
D1153	001-0529-32	MA8056-M
D1154	001-0529-32	MA8056-M
D1155	001-0529-32	MA8056-M
D1157	001-0529-32	MA8056-M
D1158	001-0529-32	MA8056-M
D1159	001-0529-32	MA8056-M
D1160	001-0529-32	MA8056-M
IC1101	051-6064-00	LC75883W
J1101	074-1279-70	20P
J1102	075-0306-00	JACK
LCD1101	379-1268-30	LCD
P1101	076-0478-55	PLUG
R1101	119-6831-15	1/10W 68k ohm
R1102	119-3911-15	1/10W 390 ohm

REF No.	PART No.	DESCRIPTION
R1103	119-3911-15	1/10W 390 ohm
R1104	119-3911-15	1/10W 390 ohm
R1105	119-3911-15	1/10W 390 ohm
R1109	116-5611-15	1/4W 560 ohm
R1110	116-5611-15	1/4W 560 ohm
R1111	116-5611-15	1/4W 560 ohm
R1112	116-5611-15	1/4W 560 ohm
R1113	116-5611-15	1/4W 560 ohm
R1114	116-5611-15	1/4W 560 ohm
R1115	116-5611-15	1/4W 560 ohm
S1101	013-6302-50	SKQMAL
S1102	013-6302-50	SKQMAL
S1103	013-6302-50	SKQMAL
S1104	013-6302-50	SKQMAL
S1105	013-6302-50	SKQMAL
S1106	013-6302-50	SKQMAL
S1107	013-6302-50	SKQMAL
S1109	013-6302-50	SKQMAL
S1110	013-6302-50	SKQMAL
S1111	013-6302-50	SKQMAL
S1112	013-6302-50	SKQMAL
S1114	013-6302-50	SKQMAL
S1115	013-6302-50	SKQMAL
S1116	013-6302-50	SKQMAL
S1117	013-6302-50	SKQMAL
S1121	013-6302-50	SKQMAL
PWB	039-2324-00	PWB(WITHOUT COMPONENT)

CD PWB section(B3):CD mechanism

REF No.	PART No.	DESCRIPTION
C101	168-1042-78	0.1uF
C102	045-4701-50	47pF
C103	046-4722-58	4700pF
C104	168-1042-78	0.1uF
C105	046-1532-78	0.015uF
C106	046-1032-78	0.01uF
C107	046-1032-78	0.01uF
C108	046-4722-58	4700pF
C109	046-1522-58	1500pF
C110	046-3332-78	0.033uF
C111	168-1042-78	0.1uF
C112	046-3332-78	0.033uF
C113	168-1042-78	0.1uF
C114	168-1042-78	0.1uF
C115	046-4712-58	470pF
C116	046-4712-58	470pF
C117	043-0533-50	0.047uF
C118	043-0533-50	0.047uF
C119	045-2701-50	27pF
C120	045-1801-50	18pF
C121	163-1063-35	16V10uF
C122	178-1052-78	1uF
C123	046-1032-78	0.01uF
C124	163-1073-05	4V100uF
C125	168-1042-78	0.1uF
C126	168-1042-78	0.1uF
C129	178-1052-78	1uF
C201	163-3363-05	4V33uF
C202	168-1042-78	0.1uF
C203	178-1052-78	1uF
C204	163-1073-05	4V100uF
C205	163-3363-05	4V33uF
C206	168-1042-78	0.1uF
C207	043-0533-50	0.047uF

REF No.	PART No.	DESCRIPTION
C208	046-6822-58	6800pF
C209	168-1042-78	0.1uF
C210	043-0533-50	0.047uF
C211	168-1042-78	0.1uF
C212	168-1042-78	0.1uF
C213	045-5096-50	5pF
C214	045-5601-50	56pF
C215	043-0533-50	0.047uF
C216	178-1052-78	1uF
C217	045-1011-50	100pF
C301	163-1073-35	16V100uF
C302	168-1042-78	0.1uF
C303	043-0533-50	0.047uF
D201	001-0516-90	MA111
IC101	051-6376-00	TC94A14FA
IC102	051-3279-90	BA033LBSG
IC201	051-5710-90	TA2157F
IC301	051-6049-08	BA5983FP-E2
J101	074-1228-76	26P
J201	074-1138-65	15P
J301	074-1138-60	10P
L101	010-2285-57	BLM21B102SPT
L102	010-2285-57	BLM21B102SPT
L103	010-2285-57	BLM21B102SPT
L104	010-2285-57	BLM21B102SPT
L105	010-2285-57	BLM21B102SPT
L401	010-3050-93	10uH
Q201	131-1188-50	2SB1188
R102	033-5621-15	1/16W 5.6k ohm
R104	033-4731-15	1/16W 47k ohm
R105	033-1041-15	1/16W 100k ohm
R108	033-1531-15	1/16W 15k ohm
R109	033-1031-15	1/16W 10k ohm
R110	033-1051-15	1/16W 1M ohm

REF No.	PART No.	DESCRIPTION
R111	033-3321-15	1/16W 3.3k ohm
R114	033-2211-15	1/16W 220 ohm
R115	033-2211-15	1/16W 220 ohm
R116	033-1031-15	1/16W 10k ohm
R117	033-1021-15	1/16W 1k ohm
R131	033-4711-15	1/16W 470 ohm
R132	033-2211-15	1/16W 220 ohm
R201	117-2201-15	1/10W 22 ohm
R202	117-2201-15	1/10W 22 ohm
R203	033-1041-15	1/16W 100k ohm
R204	033-1041-15	1/16W 100k ohm
R205	033-1041-15	1/16W 100k ohm
R206	033-1041-15	1/16W 100k ohm
R207	033-1041-15	1/16W 100k ohm
R208	033-8231-15	1/16W 82k ohm
R209	033-6811-15	1/16W 680 ohm
R210	033-6831-15	1/16W 68k ohm
R211	033-1831-15	1/16W 18k ohm
R212	033-2721-15	1/16W 2.7k ohm
R213	033-1011-15	1/16W 100 ohm
R214	033-1021-15	1/16W 1k ohm
R215	033-1031-15	1/16W 10k ohm
R217	033-1041-15	1/16W 100k ohm
R218	033-2211-15	1/16W 220 ohm
R301	117-6811-15	1/16W 680 ohm
R304	033-3921-15	1/16W 3.9k ohm
R305	033-3921-15	1/16W 3.9k ohm
R306	033-1041-15	1/16W 100k ohm
R307	033-2211-15	1/16W 220 ohm
X102	060-1528-90	16.934M
PWB	039-1945-20	PWB(WITHOUT COMPONENT)

LED PWB section(B4):CD mechanism

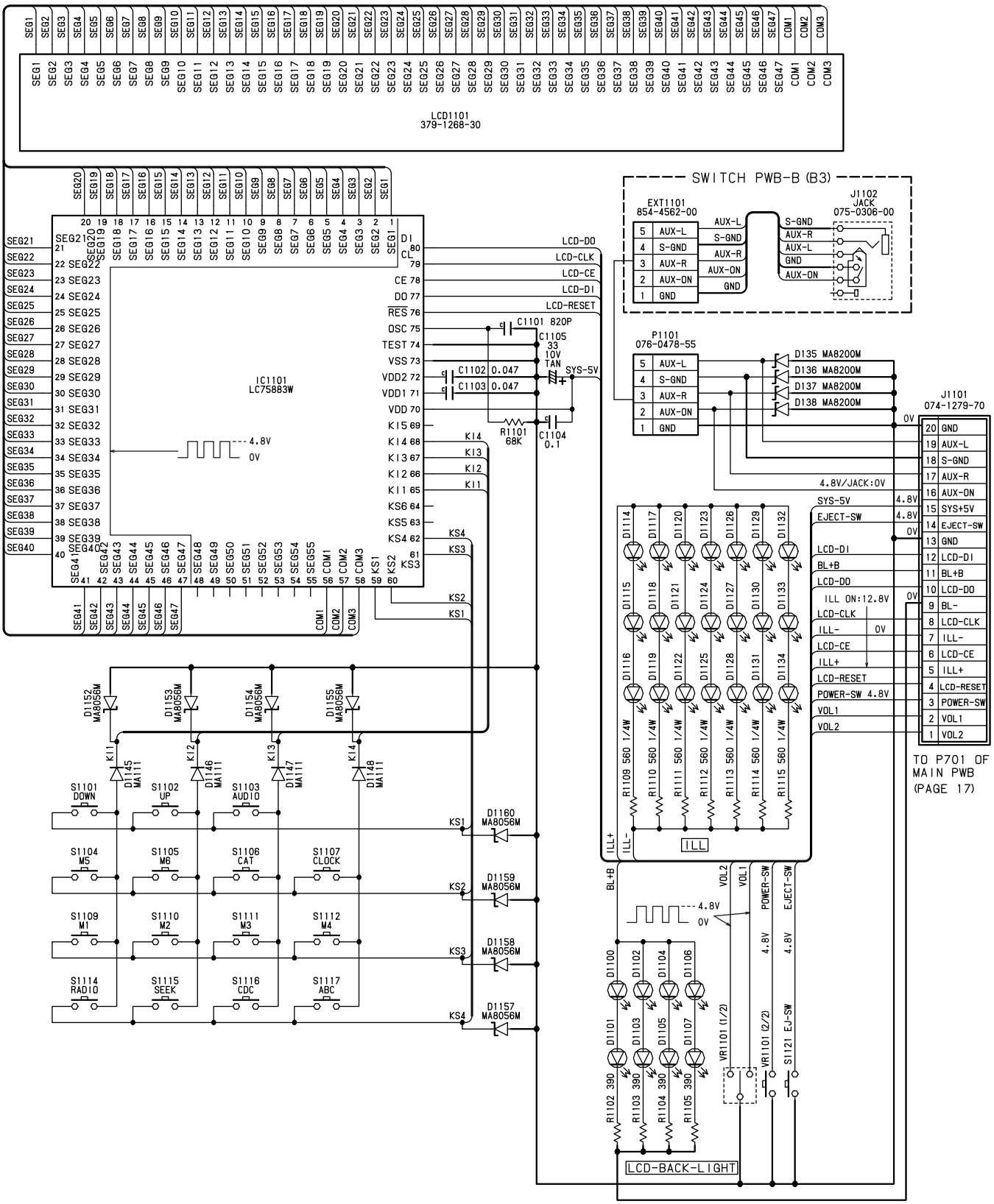
REF No.	PART No.	DESCRIPTION
D1	001-7058-90	AN1105W-RR
D2	001-7058-90	AN1105W-RR
J1	074-1138-60	10P

REF No.	PART No.	DESCRIPTION
Q1	060-4015-90	PS1192H
Q2	060-4015-90	PS1192H
S1	013-7414-50	CHUCKING

REF No.	PART No.	DESCRIPTION
S2	013-7413-50	LIMIT
PWB	039-1944-21	PWB(WITHOUT COMPONENT)

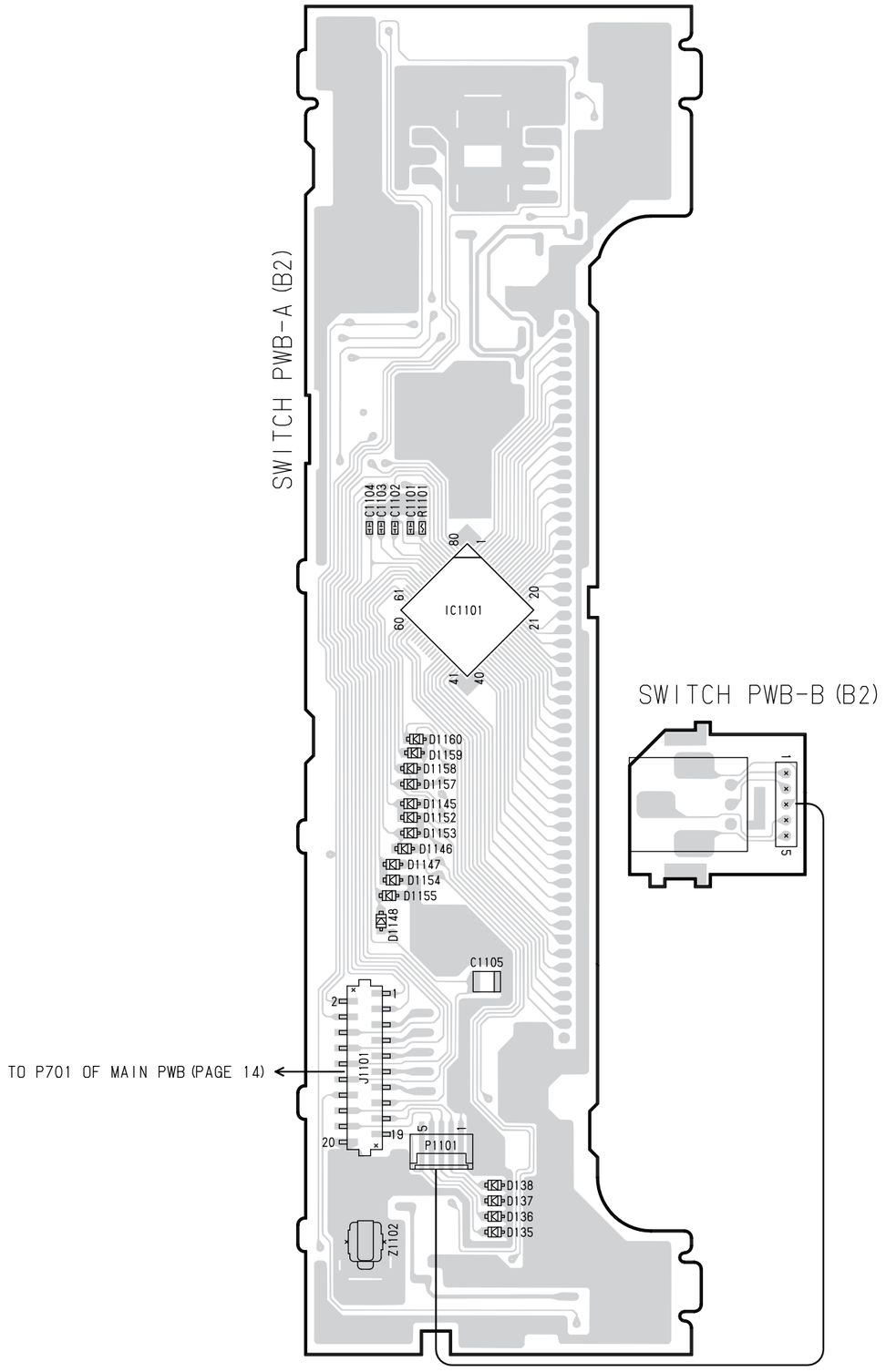
CIRCUIT DIAGRAM

Switch PWB(B3) section

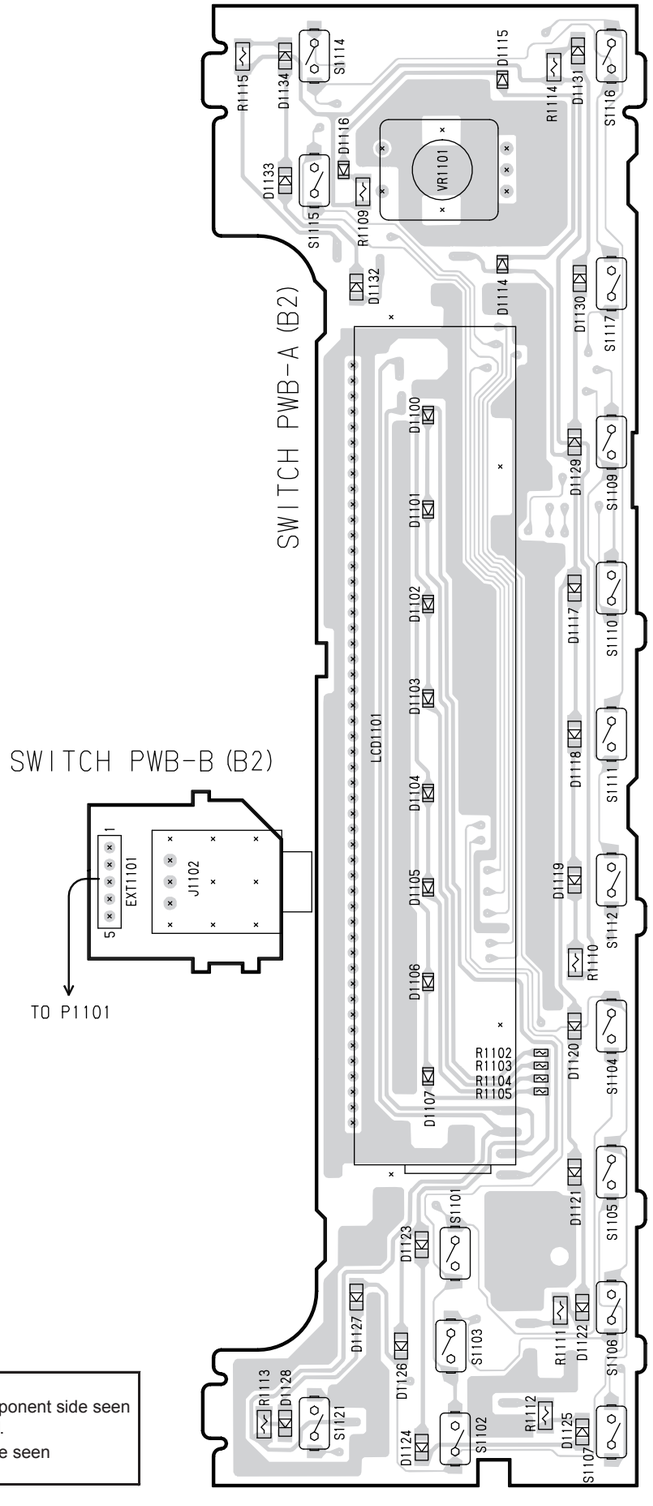


PRINTED WIRING BOARD

Switch PWB(B2) section



COMPONENT SIDE



SOLDER SIDE

Caution:
COMPONENT SIDE: Parts on the component side seen from the component side are indicated.
SOLDER SIDE: Parts on the solder side seen from the solder side are indicated.